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extended attributes

The magazine of the OS/2 community

Phoenix OS/2 Society

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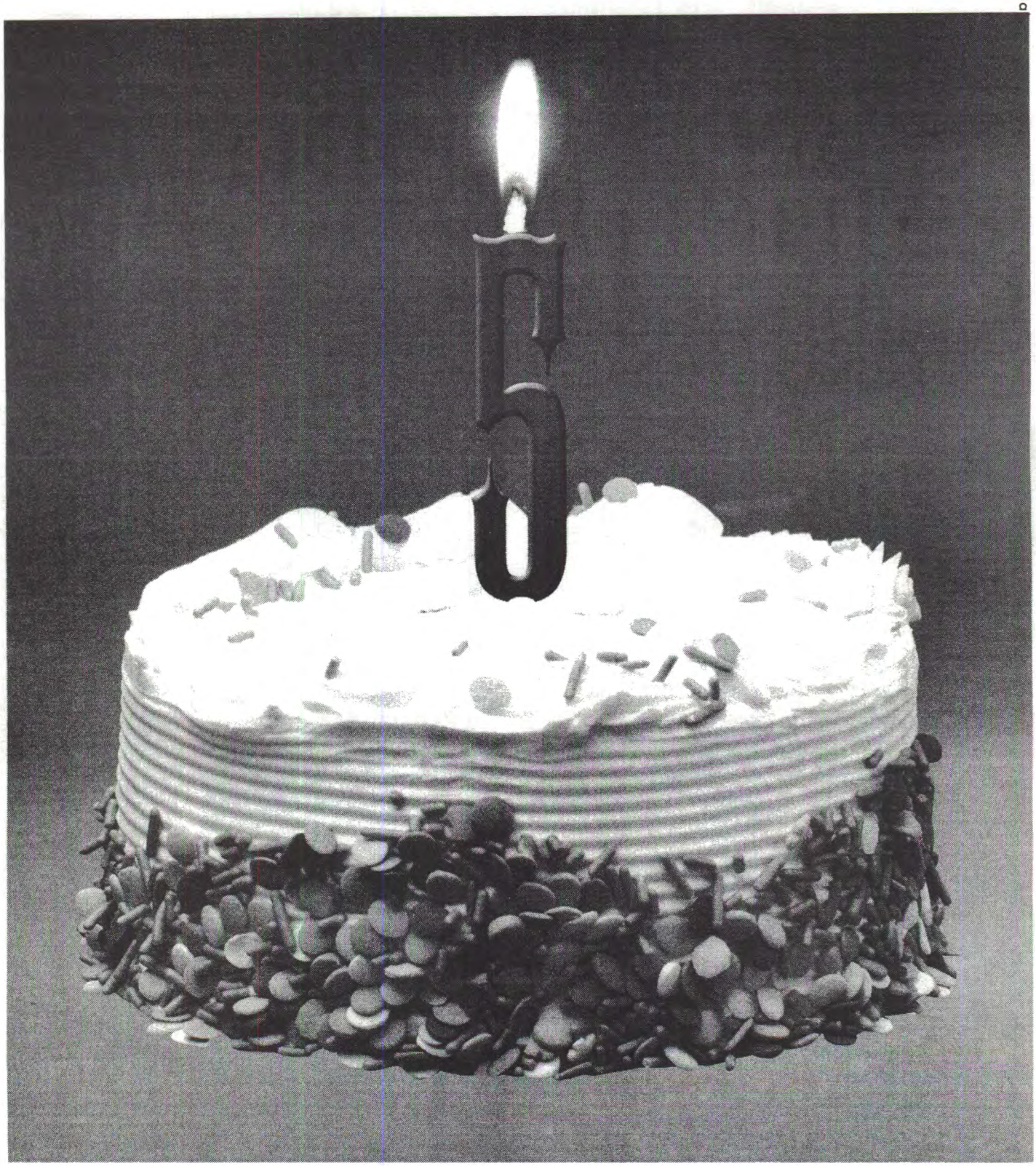

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In this issue

Cover concept and artwork tomfoolery by Bill Schindler.

Departments

Software

Society news

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Five years on

by Bill Schindler, Editor-in-chief

.comment

This issue marks the fifth anniversary of the Phoenix OS/2 Society. In August 1994, the Society was founded with the creation of the corporation, selection of officers, the first general meeting, and the publication of the first issue of extended attributes.

Five years in the computer industry is just slightly short of eternity. When the Society was founded, OS/2 2.1 had just appeared and Microsoft was laying on the hype about a product code-named "Chicago." There were bunches of small companies creating OS/2 software. There was an OS/2 magazine (named *OS/2 Magazine*) and Team OS/2 was known as a group of fanatics who did in-store demos on their own time.

A lot has changed in the past five years. Which highlights the Society's stability. Many of the core people who joined in the first two months are still involved. Many of our earliest traditions are still alive, like the after-meeting meeting and the FSM (fold, staple, mutilate) session. We've even managed to keep the dues the same for five years!

In spite of the stability, the Society has also managed to redefine itself. We moved from being an active local group to being an international group with an award-winning magazine.

With a conference in the planning stages and the constant flow of ideas that come from the board of directors, the officers, and the membership, I am certain that POSSI will continue to refine its role in the OS/2 community.

Here's to the next five years!

Thanks

I'd like to take a moment to thank some of the people who've taken a leading role in defining POSSI in the early years. Without these folks, the Society wouldn't be half of what it is today.

Probably first on any list is Esther Schindler. Throughout the lifetime of POSSI, she's acted as program chair, vice-president, assistant editor, and volunteer wrangler—usually wearing several of those hats at once.

Also high on the list is Richard Frank, who supplied a large part of the initial push to start the Society.

Then there's Walt Jackson, who wrote the Society's bylaws and got us incorporated in less than a month. Walt was also a major source of enthusiasm during POSSI's first two years.

There's the officers, the board members, the article writers, the "OS/Coup," the local IBM office, and the many people who have done all the small and large jobs that needed doing.

Without all of you, we wouldn't have reached our fifth anniversary.

Thank you!

Phoenix OS/2 Society, Inc

The Phoenix OS/2 Society, Inc (POSSI) is an international organization of computer users with an interest in IBM's OS/2 operating system and related issues.

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Yes, OS/2 Warp Server is supported

by Alan Zeichick

You know, for years we—myself included—have been complaining that vendors don't support OS/2, and that Windows has won. That's both true, and not true, as my experience in conducting a comparative server review for *InternetWeek* has revealed.

When it comes to desktop PCs and laptops, I'll be the first to admit that support for OS/2 Warp is scarce and hard to find. Both from smaller niche players and established giants, your choice is between Windows 9x and Windows NT/2000. Rather than continuing that fight, other than for product testing I stopped using OS/2 Warp on the desktop several years ago, preferring to use OS/2 as a server operating system.

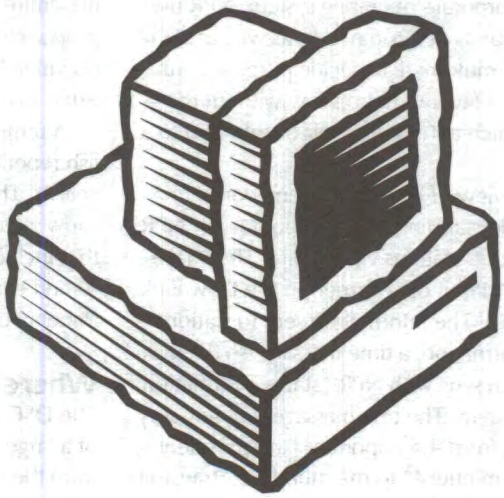
(By the way, in case you hadn't noticed, the industry has generally, and rightfully, shifted over to the phrase "server operating system" in lieu of the old phrase "network operating system," in recognition that in these days of standards-based protocols like Ethernet, IP, and HTTP, it doesn't make a whit of difference to the network what operating system is running on the servers.)

Now what about OS/2 on the server? Well, that's an entirely different story completely. All of the major vendors support multiple operating systems. I don't wish to overly discuss my *InternetWeek* review, which will appear in late September (their Web site is `www.internetwk.com`), but my testing involved four name-brand departmental servers, equipped with four-way Intel Pentium III motherboards, RAID arrays, and lots of memory. Impressive units. Our review specification was for systems that ran Windows NT 4 Server and NetWare 5, which *IntenetWeek*'s surveys show are the two most popular server operating systems on Intel platforms.

When compiling the features chart for the review, it turned out that the vendors were certifying their hardware for more than just those two very popular operating systems. According to the vendor's own technical literature, all four servers would also run SCO OpenServer, SCO's home-grown version of Unix. Three of them would run SCO UnixWare, the version of Unix that went from AT&T to Novell and then to SCO. One server ran Banyan Vines. And three were promised as able to run OS/2 Warp Server: a Compaq ProLiant 5500 Ultra2, a Hewlett-Packard Server LH4, and an IBM Netfinity 5500 M20. (None cited Linux in their literature, but I think that'll be different next year.) In several cases, the server management software, such as IBM's Netfinity Manager, also explicitly mentioned OS/2 Warp Server support, or included agents to monitor the OS/2 system.

I'll be honest—I didn't test OS/2 Warp Server on these servers, for two reasons. First, I had not listed that as a requirement when requesting the hardware, and my experience has been that vendors often build out different configurations to their OS/2 customers, in order to provide the right driver support. Two, I had allocated time and resources for testing two server operating systems on this hardware, not three, and additional testing would have been non-trivial. (Even with only two operating systems, testing took longer than expected.)

But it's gratifying to know that, in this era of "Windows 2000 Ready" and Linux, OS/2 Warp Server is alive and well in the server room.



OS/2: on the air

Making news with OS/2

by Esther Schindler

If you push IBM to tell you about OS/2's use in mission critical situations, they'll point to automatic teller machines and other such installations. Unfortunately, many of IBM's case studies are, well, boring. I'm glad that my "Yuppie Food Coupons" come out of the ATM accurately and dependably, but this type of special-purpose application is not that appealing to ordinary PC users and administrators.

Instead, I'd like to focus on a few stories about OS/2 used in business which might be just a little more interesting. The user group's July general meeting was held at Lumature, an all-OS/2 lighting store in Scottsdale, and I'm sure you'll read more about it from Joel Frey's write-up next month.

Here's another example, though, that may grab your attention. Sure, it's an OS/2 solution... but even if it didn't use our favorite OS, it's also interesting to learn how this system works.

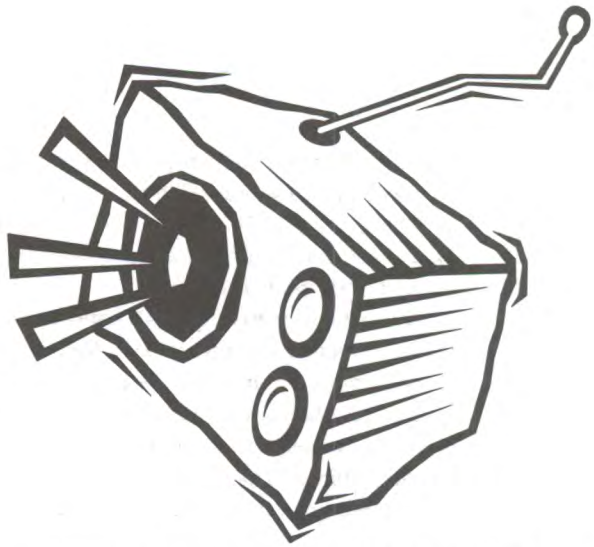
Making (radio) waves

Renowned for its journalistic excellence and providing standard-setting news, information and cultural programming, National Public Radio (`www.npr.org`) serves a growing audience of 13 million Americans each week on 600 member stations. If you're among POSSI's U.S. membership, you're probably aware of NPR's news magazines, like All Things Considered and Morning Edition. You may be familiar with its talk shows, like Fresh Air with Terry Gross. Or you might listen to Car Talk, Science Friday, or opera. International members may have heard some of NPR's programs on the World Radio Network.

However, you're probably not aware that most of those radio programs come to you with the assistance of OS/2.

OS/2 isn't NPR's corporate operating system. NPR uses Windows computers for its desktop needs, as well as some Macintosh systems for multimedia-specific purposes. But you wouldn't hear your favorite radio show without the assistance of OS/2, which automates their distribution to 450 affiliate stations.

Here's a brief overview of how the system works, filtered through the understanding of this radio novice. NPR distributes programs to its stations via satellite. They have 24 channels and a 64 kilobit data carrier on the Downlink Services Channel (DSC). The information sent to stations includes schedule information, a time message (so the local station's clock time is in sync with NPR), status information, and a text message system. The text messages are advisory in nature—everything from the important "the president is going to speak in two minutes!" to the mundane "transmitter will be tested at 2:00am."



Naturally, that system has to run 24 hours a day, 7 days a week. It's combined into a hardware/software system—which runs OS/2.

The OS/2 application is a custom-written program, written by IBM's government services division in Bethesda, Maryland. The software knows how to parse the information on the incoming downlink signal, splitting it into a text viewer, program schedule information, and so on.

One component of the OS/2 application is a program scheduler, which lets the affiliate radio station choose which radio programs to capture. The operator can look at a "display everything" view, move the interesting shows into a local view, and then identify which equipment to use. The user identifies which show to capture, and gets information about it (such as when it's available and how long it lasts). Shows are identified with a unique program ID number, time, and channel number, as well as keywords.

Once radio shows are selected, the software automates the entire process, tuning the receiving equipment to the proper channel and frequency at the correct time, and downloading it to the storage resource the user specified (such as CD or reel-to-reel tape).

A template view provides the building blocks to establish repetitive times. For example, an affiliate station that gets All Things Considered probably wants to capture the show every day. But the station can also capture any show that includes certain keywords; presumably, the Phoenix station examines information on shows with keywords of Phoenix or Arizona.

Where OS/2 comes in

The DSC and audio recording automation is just one part of a larger system—it's responsible only for the downlink from the satellite to the local station. That's the major OS/2 component; it's phase one of the three-part project, which

is largely complete. There's also uplink services, where the programming originates; for instance, Terry Gross' Fresh Air interview program comes from WHYY, a public radio station in Philadelphia. And the "head end" automation, at NPR's Washington, D.C. headquarters, is a different system. Those aren't OS/2 systems—at least not yet.

Phases two and three are up in the air, because of last year's failure of the Galaxy 4 satellite. That's the satellite on which NPR depended, so they've been running on their backup system since then. As you might imagine, that throws several wrenches into the decision-making process and budget availability.

NPR's OS/2 solution has been in place since 1995, though it spent a few years in design before that. Before this system was developed, NPR ran on a proprietary custom computer, based on an 8088 system. They contracted for a certain number of those computers to be manufactured, but once they'd used up the inventory, no more were available—and getting a single unit manufactured was price prohibitive.

When the new system was designed, OS/2 was the clear answer. NPR required preemptive multitasking, and the system needed a graphic user interface (GUI) that a relatively untrained person at the remote radio station could use. Unix didn't have a GUI that was acceptable. OS/2 was it. They've stuck with OS/2 because it works, and it's rock solid. As Vince Destajo, NPR's PRSS Technical Support Coordinator, says, "Why fix something that works?"

Now, NPR has a lot more options. But with the satellite situation clouding the situation, no decisions have been made.

Hundreds of remote systems

Sure, from a technology point of view OS/2 is a great answer—at least to readers of extended attributes. But supporting 430+ affiliate stations, in every corner of the country, required extra-special logistics. NPR couldn't tell its stations to buy a computer at any corner store.

Initially, NPR dealt with several big-name vendors, but the experience "left much to be desired," as Destajo says. NPR had to invest time determining which equipment was well supported for OS/2, but a few months after they settled on a hardware vendor, the company would change the video card or make some other OS/2-unapproved substitution. This cycle repeated entirely too often. NPR had a lot of integration problems, made worse because of the geographical distance.

Destajo knew there had to be a better way. They needed an OS/2-smart provider that could thoroughly support the operating system, so he kept looking around for a dependable supplier. Although NPR had bought some software from Indelible Blue, it took a while before Destajo had a thought balloon and called them.

He couldn't be happier.

Before NPR chose Indelible Blue, they tested the service. Destajo had "ringers" call the company to ask OS/2 technical support questions, such as "How do I add a printer to the desktop?" Every question was answered accurately and immediately.

"But what sold it for us," he told me, "is that they go through their own evaluation process to determine what equipment is OS/2-ready." No longer did NPR have to test every computer component; they could depend on Indelible Blue to supply hardware that worked with OS/2, right out of the box.

Indelible Blue was also able to work with Quadron, the vendor who manufactures the ARTIC card used for the system's real-time interface communications. The 8-port RS485 card, with an 80186 on-board, lets the communications processing happen on the card, instead of relying on the computer system's CPU. Because the data handling is done on the separate card, the communication performance is top-notch—which is obviously a requirement for this application.

When a radio station signs up with NPR, they're instructed to call Indelible Blue to get their computer for downlink services. Indelible Blue has a part number for the designated system with Quadron card, on which OS/2 is pre-installed as well as the NPR custom application. Indelible Blue also takes care of support phone calls, directing any application-specific questions back to the NPR folks in Washington, D.C. Probably, most users are unaware that they're using OS/2.

The NPR arrangement with Indelible Blue is working perfectly. The downlink system is strong and reliable. NPR may decide to upgrade the hardware, at some point, and they're currently trying to decide whether to rely on Warp 3 fixpacks, to cope with Y2K issues, or to upgrade the systems to Warp 4. If they decide on a Warp 4 upgrade, the money would come from the station's own computing budget.

Don't touch that dial!

A happy OS/2 vendor. A contented customer. A solution that delivers what the client ordered—and gets you the news you need. Doesn't that radio a message that OS/2 is alive and well?

I'm sure that this is only one of many business success stories in which a company relies on OS/2. If you have one to share, write to me about it at esther@bitranch.com. Maybe I'll write about it next time.

Server services

by David Both

In this final installment of my series on networking, I discuss network services that run on the server.

Each of OS/2 Warp Server's several services provides one or more network functions. These services can be started automatically during the server startup and initialization process. They can be started, stopped, or paused from the command line or from the Server Administration GUI.

Server service

The Server service enables servers to share files, print queues, and serial devices with clients. The Server service requires the Requester service in order to run. The Server service can be started directly, but if the Requester service is not already running, it starts it before starting itself.

All servers in the domain must run the Server service. All the services described below require the Server service as a prerequisite.

The LSserver service provides DOS LAN Services support. DOS LAN clients rely on this service to provide file and print sharing for them, as well as login and logout. This service is controlled by the Server Service.

All servers in the domain must also run this service.

Netlogon service

The Netlogon service performs three main functions.

It copies the NET.ACC file from the domain controller to all other servers in the domain. This ensures that all servers use the same user and group information.

Each server in the domain uses the Netlogon service to control access to resources owned by that server.

The NET.ACC file contains user ID and group information, used by the domain controller and by backup domain controllers (if any) to validate user logon requests.

The Netlogon service is required on all servers in the domain, and is part of the default installation process. The Netlogon service must be started for the domain to be fully operational, though it can be paused to prevent users from logging on during certain types of server maintenance. Users who are already logged on when the Netlogon service is paused are not affected.

Alerter service

The Alerter service generates messages when system events occur and sends then to the User IDs or groups specified in the IBMLAN.INI file. Alert messages are most commonly sent to network administrators.

The Alerter service is installed automatically, but the desired user IDs or group names must be added manually to the IBMLAN.INI file.

The Generic Alerter service takes messages generated by the Alerter service and converts them to an SNA (Systems Network Architecture) format, which can be routed to NetView or LAN Network Manager.

This service requires FFST/2 (First Failure Technology Support) to be installed on the server. The Generic Alerter service is optional; it doesn't need to be started on networks without a connection to a system running NetView or LAN Network Manager.

Netrun Service

Client systems can use the Netrun service to run programs on the server. This remote execution uses the server's processor, RAM, and other resources rather than those of the client computer. The Netrun service supports only non-interactive programs—those that require no user input and produce no output. As a result, the Netrun service is of limited usefulness.

The Netrun service is installed on all servers, but doesn't have to be turned on; it can be started when required.

Remote boot service

This service supports the RIPL (Remote IPL) functions of diskless and other Remote IPL workstations. This service is only installed on servers designated to provide this service. It must be installed using the Tailored installation path.

UPS Service

The UPS (Uninterruptible Power Supply) Service performs an orderly server shutdown when the power fails and remains off for a specified length of time. When the UPS tells the server that power has failed, the service sends users and administrators a message, so everyone can perform an orderly shutdown.

The UPS hardware must be connected to the server through a serial port with the appropriate cables in order for this service to function properly. This service is optional and is only installed when specifically chosen during the installation procedure.

DCDBRepl Service

This service is a specific implemen tation of the standard Replicator service. The Domain Control Data base is replicated from the domain controller to one or more backup domain controllers. This enables the backup domain controller to assume user logon and logoff responsibility if the

domain controller fails becomes unavailable. The DCDBRepl service copies the domain control database (the \IBMLAN\DCDB directory and its subdirectories) to the backup domain controllers, to ensure that a current copy is always available.

One backup domain controller can be used to validate user logons, if the domain controller is down or unavailable.

Timesource Service

With the Timesource service running on the domain controller, the domain controller is identified as the source of reliable date and time information for the rest of the network. Client computers which log in have their local time set from the time source kept on the domain controller.

The Timesource service does not keep the time; rather, the computer hardware on which the timesource is running actually keeps the time. You should regularly check the system's time for accuracy.

I hope that this short series has given you a sense of networking with OS/2 Warp. There is, of course, much more, but this should whet your appetite.

Linux

As I watch the discussion lists, I see many people asking about Linux and how it compares to OS/2. Some people also seem to think that a trend to Linux is part of a larger trend away from Microsoft products and offers a new "window of opportunity" for OS/2.

I have been playing with Linux recently, and have been reading the trade magazines. I will go into more detail about how Linux stacks up to OS/2 and Windows NT in coming months, but I want to give you a hint right now: Linux is a great server operating system but isn't ready for the desktop.

See you next month.

David Both is a Senior Network Engineer at a large telecommunica tions company. He has many certifications, including OS/2 Engi neer, Systems Expert (Warp Server for e-business), Dell PowerEdge Server Specialist, and Microsoft Certified Professional. He can be reached at dboth@millennium-technology.com. His web site is www.millennium-technology.com.

Setting pretty

by Marilyn Pizzo

Last month, we looked at the config.sys file, and learned how its statements play an important role in how your system works. This time, let's continue our examination of config.sys, and identify a few more statements.

Performing well

Some statements in config.sys specify which features of OS/2 will be activated, and how they'll operate when your system completes the boot up procedure. We already discussed some of these, such as DISKCACHE, IFS, LIBPATH, MAXWAIT, MEMMAN, SWAPPATH, and THREADS.

The COUNTRY statement controls how dates, time, decimal points, sorting, and codepages are used. The three digit code that appears first is the country number—001 is the code for US English. After that is the drive, path, and file name where the information is located. Typically, your COUNTRY statement will look like this:

```
COUNTRY=001, C:\OS2\SYSTEM\COUNTRY.SYS
```

DOS what it's about

Several config.sys statements concern themselves with DOS sessions. Remember the old DOS statement, `FILES=20`? This is the default setting for a DOS session running under OS/2, specifying the number of files to be allocated. If a particular DOS program requires more than 20, you can override the DOS settings for that session in the program object's properties notebook.

A similar statement is FCBS. File Control Blocks are used by DOS programs to contain information about the files being used. `FCBS=16,8` is the default setting where 16 is the total number of files that are expected to be open at any one time in a DOS session and 8 is the number of File Control Blocks that will be locked into memory. If more than 16 files are requested, the block least recently used will be discarded and the new file put in its place. The eight locked files will not be discarded. File Control Blocks were used by programs written for earlier versions of DOS but are not used for more current programs.

Another familiar DOS statement is `DOS=LOW,NOUMB`. (This default setting, like the other DOS settings you find in config.sys, can be overridden using the DOS Settings in an individual DOS session.) This statement controls the default use of the High Memory Area and the Upper Memory Blocks in DOS sessions. LOW means that DOS will load into conventional RAM and not use the High Memory Area. Changing this to HIGH will free more conventional RAM for DOS programs and load some portions of DOS into high memory, above 640K. NOUMB prevents a DOS application from being loaded into upper memory blocks (the unused addresses between 640K and 1M). Changing this to UMB allows you to use LOADHIGH and DEVICEHIGH to put device drivers in UMBs.

The BREAK statement tells OS/2 whether to monitor DOS sessions continuously to see if the Ctrl+Break keys were pressed (`BREAK=ON`) or only when I/O is happening (`BREAK=OFF`). Keeping the default of OFF will increase performance. The RMSIZE statement determines the amount of conventional memory to be allocated to DOS sessions in kilobytes. The maximum size is 640. Because OS/2 uses less memory than DOS, most DOS programs can run with a smaller number being used. The SHELL statement determines the command processor that is loaded in DOS command sessions. The default is OS/2's COMMAND.COM although other command interpreters are available.

More control

Another performance statement is IOPL (I/O Privilege Level). With this statement set at YES, programs can gain direct access to hardware devices when needed. NO restricts everything other than OS/2 and device drivers from the IOPL. You can also specify particular programs that you want to allow IOPL.

You will notice the PRINTMONBUFSIZE statement has three values assigned, with a default of 134 for each. This statement sets the buffer size for the print monitor buffers. The three values are for LPT1, LPT2, and LPT3 respectively. Increasing the values will only increase performance if you have a print monitor installed that can use the extra memory. The default is usually sufficient for most systems.

Getting SET

Another group of statements in config.sys are concerned with environmental variables. All of these statements start with SET. They are used to activate features in the OS/2 environment. You can type SET from an OS/2 command prompt to see the current settings in effect. Last time, we discussed SET AUTOSTART, SET PATH, and SET DPATH. Let's look at some of the other statements you might have in your config.sys file.

SET BOOKSHELF sets the path for finding on-line documentation (.INF files).

SET COMSPEC sets the name of the OS/2 command processor and is available for use by programs that have an "exit to shell" option.

SET DELDIR activates the UNDELETE feature for OS/2 sessions. If you have this feature activated, when you delete a file it will be stored in the DELETE subdirectory

and can be retrieved using the UNDELETE command.

SET EPMPATH sets the directory where you will find the Enhanced Editor files.

SET GLOSSARY sets the path where the Master Help and Glossary files are found.

SET HELP sets the path that OS/2 uses to search for Help files.

SET IPF_KEYS=SBCS tells the Help Manager how to tell what type of keyboard translation to use.

SET KEYS=ON activates command line editing and retrieval in OS/2 commands.

SET OS2_SHELL states the name of the OS/2 command processor which is started when an OS/2 session is opened.

SET PROMPT=$i[$p] defines the command prompt in all OS/2 sessions. The $i parameter activates a help line that appears at the top of the command screen.

SET RUNWORKPLACE specifies the program that should be used as the Workplace. PMSHELL.EXE is normally what is used.

SET SYSTEM_INI and SET USER_INI name the default System and User .INI files. These are two statements you should never have to change.

SET VIDEO_DEVICES sets the name of the OS/2 environment variable that contains the base video driver names. Along with this statement, there must be a SET statement that defines the video devices. If you have `SET VIDEO_DEVICES=VIO_SVGA` you must also have a SET VIO_SVGA statement which will select the base video support. That statement might be similar to:

```
SET VIO_SVGA=DEVICE(BVHVGA,B VHSVGA)
```

File closed

If you look at your own config.sys file, you will see many of these statements or something similar. Hopefully, you are starting to understand a little better what is going on in the config.sys.

OS/2 command line secrets

by Jim Lewis (jklewis@rytebyte.com)

In today's world of colorful icons, high-resolution 21-inch monitors, and fancy GUIs, it seems like the average user has forgotten about the command line. That's too bad, as a command line utility often works better or faster than the graphical interface. In this article, I will discuss some of the more useful commands in OS/2 that you can type in an OS/2 command window, as well as their advantages and their possible pitfalls.

Internal commands have been underlined.

ATTRIB: Ever try to find a file in a directory that you know is there—only to find it's invisible or something? Try typing `attrib *` in that directory. It will show *all* files, even hidden and system ones. You can also use attrib to set or remove attributes and to recurse into subdirectories.

BACKUP and RESTORE: These commands are supposed to backup and restore your system, but I have never seen them work reliably so I do not recommend their use. If you're really strapped for a backup option and you have a spare hard disk, XCOPY may do what you need.

XCOPY: XCOPY is among the most powerful and least understood commands. XCOPY can copy just about anything to anywhere. It's very useful in cloning drives.

For example, `XCOPY d:\ g:\ /h/o/t/s/e/r/v` will copy every file and directory from the D drive to the G drive, including hidden files and empty sub-directories. Note that locked files may not get copied.

CHKDSK: Used to detect and correct errors on file systems. CHKDSK works pretty well, unless your system is really messed up. Some people suggest using the /F:3 parameter—don't.

FORMAT: The FORMAT statement is used to prepare a hard drive partition or floppy disk for use; if the drive already had data on it, everything will be erased. When you use it to format a drive, don't forget to use the /L (long format) option. If you don't use /L and then perform a CHKDSK /F:3, you can have disasterous results. FORMAT very stupidly defaults to the short format, and I suggest to anyone installing a new system that they break out of the install process and format the drive manually, from the command line, using the /L option. (An earlier issue of extended attributes described the FORMAT options in some detail. In brief, the quicker format takes shortcuts that leave old data on the partition, and a CHKDSK /F:3 may recover old data.)

COPY: This is another command line staple. Since you're probably familiar with this command, I'll just remind you to make full use of wild card characters whenever possible. Also, by using the /b option you can concatenate binary files, if you ever have to.

DEL: Deletes a file or files. Wild cards work too, just be careful.

DIR: The good old directory command! I see people misuse this command all the time, because they don't realize its capabilities. A few useful parameters to learn about are /w for a wide listing, /p to pause the output, /s to recurse into sub-directories, and many more. The sorting options are very useful as well. Spend some time with the Help files, and you'll be surprised at what you've been missing. For instance, try `DIR /o-d` in a large directory, and you'll see the directory sorted by date.

FDISK: Most people know how to use the fixed-disk utility to divide their hard drives into separate partitions, called logical drives, but you can also use the /query parameter to see how your hard drive(s) are laid out. You can use /newmbr to (sometimes) restore a damaged Master Boot Record. (Don't try the latter on a whim, though.)

HELP: Some folks don't know that you can just type help something and the GUI Help system will (usually) pop up and place you right at the info you want in the Command Reference. This is infinitely preferable to looking around on your OS/2 Desktop for where the reference is.

MAKEINI: This utility is used to repair damaged INI files. Again, it only works if they aren't in too bad a shape.

MODE: Among other things, MODE can be used to change the number of rows displayed in an OS/2 command line session. This is very nice, especially when you're using one of those big monitors. Note, though, that some OS/2 commands only handle 25 rows.

MOVE: If you need to move a file or files to another directory on the same drive, use this command. This way you don't have to copy and then delete the files.

TYPE: Use TYPE to display a text file to the screen. This is a handy command when you just need to view a file. For longer files, you'll want to use TYPE along with MORE, which pauses the display between screens so the file can be read. For example, try

```
type config.sys | more
```

MORE can also be used by itself:

```
more < test1
```

Don't confuse TYPE with VIEW, which you use to look at an .INF or .HLP file. When you do a help on a command, it actually uses VIEW to show the Command Reference .INF file.

PSTAT: If you want to learn about the processes and other things going on inside your system, type `pstat` at a command prompt. This is similar to the `ps` command in Unix.

continued on page 13

FOOBAR!

by Bill Schindler

One of the things the Phoenix OS/2 Society is known for is its members' love of food. Combine food with OS/2, an afternoon by the pool, lots of camaraderie, and POSSI's fifth anniversary and you get FOOBAR!

What's FOOBAR, really? It's POSSI's (mostly) annual Friends Of OS/2 Barbeque and Revelry (FOOBAR). Each year, FOOBAR is held sometime in August, when it's too hot to sit in a meeting room, but we still want to get together.

This year, FOOBAR returns to Robert "Rosey" Rosenwald's house. You should bring something to share. (If you're not sure what to bring, send an email to Rosey at `robert@perfectniche.com`.) Rosey has offered to take care of the meat part of the barbeque—if you're planning on attending, he'd like you to drop him an email so that he can have a rough estimate of the number of attendees.

There's a pool, so be sure to bring along a swimsuit and a towel.

FOOBAR is Saturday, August 14. Festivities start at 1:00pm and go until whenever.

what

- FOOBAR

where

- "Chez Rosenwald"
  8350 E San Ricardo Drive
  Scottsdale, Arizona

when

- Saturday, August 14, 1999
- 1:00pm: Party!

Directions

Rosey's house is at 8350 E. San Ricardo Drive, Scottsdale, AZ 85258. If you get lost, call 443-4282.

The main cross streets are Hayden and Via Linda. Via Linda is South of Shea and North of Indian Bend.

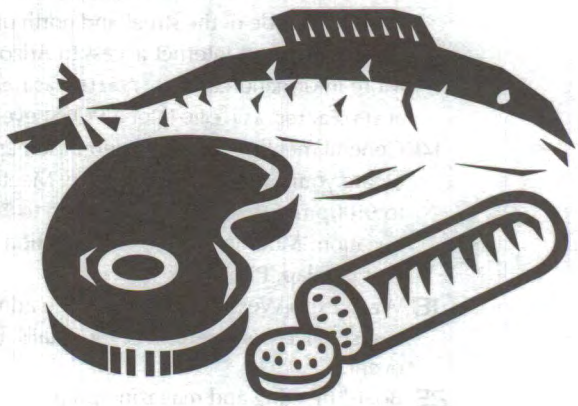
To get there on surface streets:

- Take Hayden to Via Linda
- Go east on Via Linda 1 block to 83rd Place
- Go north on 83rd Place and it turns into San Ricardo

To get there via the freeway:

- Take 101 north to the Via Linda exit, which is 90th street
- Go north on 90th to Via Linda
- Go west on Via Linda to 83rd Place
- Go north on 83rd Place and it turns into San Ricardo

We hope to see you there!



Coming events

A list of events scheduled by the Phoenix OS/2 Society and other OS/2 user groups.

history

August 1999

August

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

3 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.

5 Magazine submission deadline for September issue. Articles should be sent to `editor@possi.org`. For other arrangements, call 602-585-5852.

14 FOOBAR (Friends Of OS/2 Barbeque And Revelry), celebrating POSSI's 5th anniversary. Location: Robert "Rosey" Rosenwald's house.

28 Board meeting and magazine prep. Meeting is 10:00am to 1:00pm. Eat a brunch, learn about the inner workings of the Society, and help get extended attributes ready to mail. Location: Bill and Esther Schindler's house in north Scottsdale, 9355 E Mark Lane. Call 602-585-5852 or send email to `esther@bitranch.com` for directions.

September 1999

September

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

5 Magazine submission deadline for October issue. Articles should be sent to `editor@possi.org`. For other arrangements, call 602-585-5852.

7 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.

9 AzTeC Computing Free-Net five year anniversary celebration. Guest speaker Marshall Trimble, Arizona's official State Historian. Refreshments will be served. Location: 7:00pm at the Tempe Elementary School District Building on Rural Road, just north of Southern, on the east side of the street and north of Frys. (AzTeC provides no cost Internet access to Arizona residents.) More information at `http://aztec.asu.edu` or from `austin@aztec.asu.edu`. (Not a POSSI event.)

14 General meeting; iTool, a Web-based application to create your own e-commerce site. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

18 Warp Expo West, Orange, CA. Free admission. See `www.scoug.com/warpexpowest` for details. (Not a POSSI event.)

25 Board meeting and magazine prep.

October 1999

October

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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12 General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

16 Warpstock '99. Location: Atlanta, Georgia. See `www.warpstock.org` for details. (Not a POSSI event.)

23 Board meeting and magazine prep.

November 1999

November

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

2 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.

5 Magazine submission deadline for December issue. Articles should be sent to `editor@possi.org`. For other arrangements, call 602-585-5852.

9 General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

27 Board meeting and magazine prep.

December 1999

December

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

7 net.sig (Internet SIG). Meeting is 6:00pm to 8:00pm. Coordinator Mike Briggs. Location: KDC, 2999 N 44th St, 4th floor, Phoenix.

5 Magazine submission deadline for January issue. Articles should be sent to `editor@possi.org`. For other arrangements, call 602-585-5852.

14 General meeting. Meeting is 7:00pm to 9:00pm. Q&A session is 6:30pm to 7:00pm. Location: Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

25 Board meeting and magazine prep.

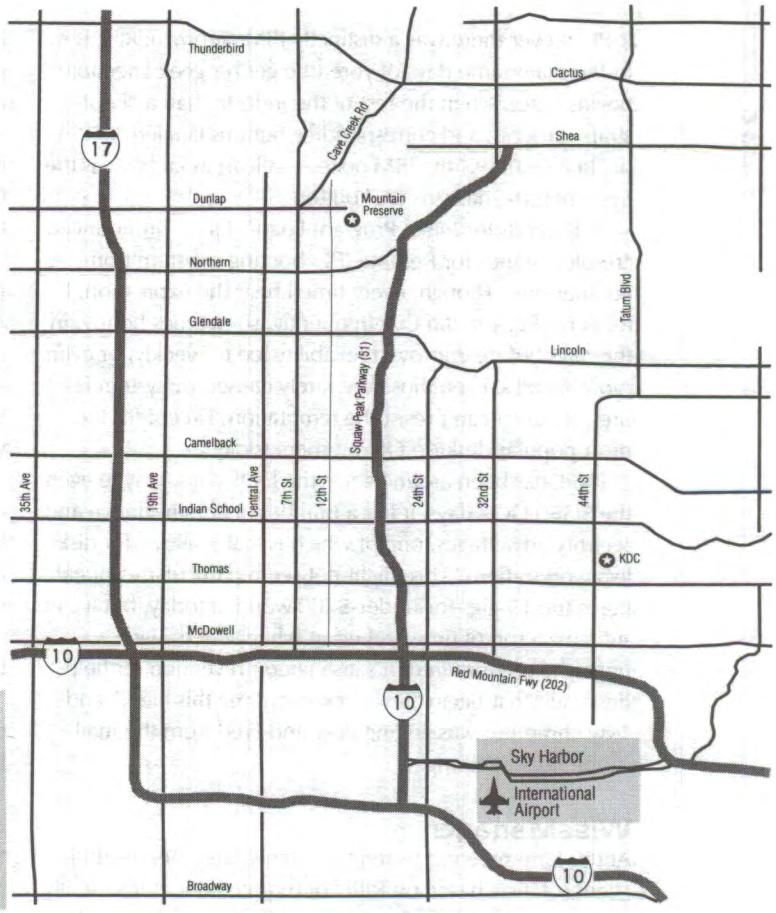
Meeting locations

Directions to meeting locations.

General meetings are held at the Mountain Preserve Reception Center, 1431 East Dunlap, Phoenix.

From the Black Canyon, exit at Dunlap and head east. From the Squaw Peak, exit at Northern. Go west to 12th Street, turn right, go north to Dunlap, turn right, and it's two blocks up on the right.

The "How OS/2 Works General Interest Group" and the Internet SIG (net.sig) meet at Knowledge Development Center, 2999 N 44th St, Suite 400. That's just north of Thomas, in the building with the green dome. Plenty of free parking is available in the garage behind the building.



continued from page 10

RECOVER: You can use RECOVER to recover a file from a damaged file system or drive. Be very careful if you use this command, and beware that using it may destroy what is left of your system. Use as a last resort only!

RMVIEW: This command determines hardware, interrupts, ports, and other things in your system. RMVIEW works okay, but only with devices that are Resource Manager aware.

SORT: This command is useful only if the file you need to sort is less than 63K in size.

START: START is a very powerful command which you can use to launch other programs of virtually any type. It's used most often to start PM apps from the command line. Contrast START with DETACH, used to launch a program that does not need keyboard or display.

SYSLEVEL: Used to show at what level the various components on your system are.

VER: Use `ver /r` to get revision info which shows the version of the OS and fixpack level which your running.

There are of course many more commands than these—I just listed a few of the more common ones.

Also remember that, in most cases, you can redirect the output (or input) of commands to a file for viewing later. For example, to get a directory listing into a file, you can type `dir > file1`.

By using the GUI and the command line together, instead of just one or the other, you can increase your productivity and spend less time fighting the shortcomings of each. For more information on these commands and the parameters each can take be sure to consult the OS/2 Command Reference.

RIPLs of pleasure

by Joel Frey

.Last month

RIPL. If ever there was a distinctly IBM acronym, RIPL is it. In the mainframe days of yore (the geezer geek anecdote begins here), when the rest of the industry had a "bootstrap" process, and corresponding buttons labeled "BOOT" or "BOOTSTRAP," the IBM boxes—at least as far back as the System/360—had an "IPL" button.

IPL stands for Initial Program Load. "RIPL," pronounced "ripple," stands for Remote IPL: booting a system from another one. Though, every time I hear the expression, I think re-IPL. We did that frequently, sometimes hourly, in the days before improved reliability led to weekly, or even monthly IPLs. Even those are rarely caused by system failures. (Okay, I can't resist the temptation: Except for the most popular desktop OS out there today.)

RIPL has been around since the DOS days, maybe even the S/360 DOS days. It has a number of administrative and security advantages, one of which is that it allows for diskless workstations. This might not seem particularly appealing in the 15-gigs-for-under-$200 world of today, but it can still save a ton of time and effort when system-wide upgrades are required. It's also good prevention for helpdesk calls that begin "Somebody sent me this file..." and "My computer was getting slow and Fred from the mail room did something...."

WiseManager

At the June meeting, Serenity Systems presented its thin-client solution based on RIPL (or remote boot as it's usually called outside IBM). Kim Cheung, also of TouchVoice Corporation, known for his OS/2-based computer-telephony applications and CTG (Chief Technical Guy) of Serenity, made the presentation in his usual fashion. That's to say: an enthusiastic mixture of technical and industry knowledge. If you've seen one of Kim's Warpstock presentations, you know what I mean.

This offering includes Serenity's proprietary software, packaged in various ways, with and without OS/2 server software and some recommended hardware.

The software consists of three components: WiseManager, WiseServer, and WiseClient. WiseManager is the administrative interface for the system, and is used to configure both the clients and the server. WiseServer is the interface for managing the server portion of the configuration. WiseClient, as you've probably guessed by now, is the component that runs on the OS/2 client and implements the configuration and rules established by the administrator.

The idea behind all of this is to offer a suite of applications and hardware that is known to work in this configuration, and sell the system through a third party who would perform the field service. For that reason, Serenity offers an evaluation package to potential partners to determine which applications work and what's needed to make them functional if they don't. Although it is easiest to use with OS/2 Warp Server for e-business, it can be used with other OS/2 servers.

Hardware issues

About that hardware. It turns out that finding a network card that works for remote boot is not easy, especially among those Kim referred to as "consumer grade," so Serenity has tested and makes available NICs they know will work.

Video is another issue because of the lack of reliable OS/2 drivers. For that reason, part of the package will be a low cost workstation, which Kim referred to as a "throw-away PC" valued in the $300-500 range. The client can even have a hard drive that would permit the swap file and other temporary data, and possibly even an alternative OS to be used occasionally.

The competition? Since this is an OS/2-based thin client, you might ask yourself how this differs from WorkSpace On Demand. Although it can coexist with WSOD, Kim said he has made a point of not looking at WSOD so he can't be accused of copying anything. But he does know that it's designed for a minimum of several hundred clients divided into classes, so that all the clients in a given class have the exact same hardware and software configuration.

WinTerm and Citrix are probably the two most widely known, but Citrix is more widely used. As Kim pointed out, Citrix is "on a leash" in terms of how successful they can become, because of the company's dependence on and relationship with Microsoft. They both have the distinct disadvantage of executing the application on a server, and could require as much as 1.6 GB of memory. The IBM client PC Serenity Systems showed at the meeting "has a 400MHZ CPU, the latest video display and sound card, the latest technology has to offer. Why in the world would I want to shift my processing to the server... and it's an Intel server. How many tasks can you run on an Intel server?" (Somebody said five to ten under Windows.)

One big problem with most policy-based systems (thin-client or otherwise) is that they frequently put the user in a straight-jacket. This sometimes means that any changes made to the desktop by the user, when they are even allowed, do not persist across sessions. For ease of administration, and perhaps due to a lack of capability in the NOS, many shops reset the user profile after each session. It's this

lack of flexibility and personalization that could make or break a thin-client network in terms of acceptability to users. This isn't an issue with WiseManager since they preserve the KEY fileset across sessions (those files like the config.sys that are saved when you select archiving in OS/2).

And, because everything originates from the server, the user can move from one workstation to another without worrying about what's installed on that particular machine. This has been a gripe of mine for a long time. Some organizations' application install scripts are set up so that they can't be altered to point to the user's fixed space on a network drive. The applications always install to the local drive. When it's necessary to work at another PC, the application and even the user's data are unavailable. Yes, it would be nice to use a laptop in that situation, but it's an expensive solution and comes with its own set of problems.

Perhaps the major feature of Serenity's offering is the simplicity of administration. You can quickly add a user or change the configuration. Because it's not necessary to do a full-blown install, the client can be ready to go in a short time.

As Kim pointed out, he really just exploited what was already available in the API. He used his own household as a simple example of how this might be used. He uses his laptop as the server and administers the system from there. Each family member has his or her own thin client, and they share an Internet connection. Kim has Innoval's WebWilly installed on the server to control site access, and when he wants to stop all access — like the kids should go to sleep, already — he shuts down his laptop.

Serenity seems to have a accomplished something unique and appealing here: a low cost-per-seat, easy-to-administer, scalable, client- server environment based proven hardware and software that doesn't come with overwhelming startup costs. I hope they succeed.

In the Driver Watch seat

New support for your OS/2 hardware

by David Wei, davidwei@cybermail.net

We have a small batch of device driver updates this month — but a few of them are especially good!

S3 Updates ViRGE Driver

S3 updated its ViRGE driver. The company has always combined both the English and Japanese version into one. So now you won't have to worry about the driver being a different language version than yours. (The DBCS version of OS/2 can easily use the Japanese version of the OS/2 video driver.)

However, the driver disappeared from the S3 site after a while. If you know why, please let me know.

FAT32.IFS driver update

Henk Kelder released version 0.89 of his drivers for FAT32, dated (6/14/99). This version provides fixes to enable FAT32.IFS to work with OS/2 Warp Server for e-business. `www.os2ss.com/information/kelder`

S3 Savage 3D/Savage 4 Driver

You may have had a hard time finding an OS/2 driver for S3's Savage 4 video. Fortunately, it is now available on Hobbes! I have not tested the driver, but would be interested in the results from S3 Savage 4 users.

It is available on Hobbes at: `ftp://hobbes.nmsu.edu/pub/os2/system/drivers/video/s3d61005.zip`

VIA does OS/2

VIA recently released its new Busmastering IDE driver. If nothing else, it's huge. VIA includes a whole load of other drivers (all flavors of Windows, SCO Unix, NetWare, and more), so the whole package weighs in at a whopping 1.2MB. The OS/2 driver is dated May 25, 1999, and it would be interesting to see how it compares to the DaniS506.ADD driver package.

Scroll to the bottom of the screen to find the driver labeled **DOS/OS2 All in One Driver** at `www.via.com.tw/drivers/index.htm`.

SANE 1.0.1 for OS/2

Yuri Dario (`mc6530@mclink.it`) has released version 1.01 of SANE (Scanner Access Now Easy). It's available from `www.quasarbbs.com/yuri`.

IBM DDPak Web site check

IBM adds more IDE CD-ROM support to its IDEDASD.EXE driver. I'm not completely sure what additional support was actuallly added. The readme.txt file hints about "Multi-Session CD," but wasn't that already supported? This version of IDEDASD.EXE also provides IDE removable support and quite a bit of support for ATAPI (removable) devices.

The IBM's OS/2 DDPak Web Site got a fairly massive update on the Adaptec SCSI drivers, for 41 products. Not to be left out, IBM also got some new/updated driver of their own, including new driver for ServeRAID-3H and-ServeRAID-3L each. And there's an updated driver for ServeRAID, ServeRAID/2 and ServeRAID-II.

IDEDASD.EXE: `ftp://ftp.software.ibm.com/ps/products/os2/os2ddpak/idedasd.exe`

SCSI Driver Update: `http://service.software.ibm.com/os2ddpak/html/diskands/index.htm`

More?

If you learn about any driver updates that other user group members should know about, drop me a line at `davidwei@cybermail.net`.

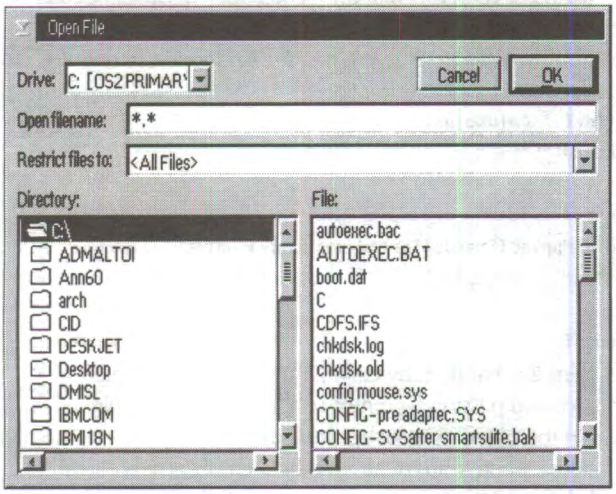
Dialog Enhancer

by Marilyn Pizzo

review

When I agreed to review Dialog Enhancer, I wasn't sure what it might do. But after reviewing this neat utility, I have no desire to uninstall it. Dialog Enhancer '99 is a subtle, but extensive desktop enhancement utility. Sure, it makes things nicer to look at, but this application fills in the spaces in OS/2 Warp 4.0 where IBM left off.

You really need to experiment to see some of the changes that Dialog Enhancer makes in your system. When you exit an application, the dialog box that pops up may have a 3-D effect. The boring little gray square at the top left corner of a window—the one that gives you a pull down menu for minimize, maximize, or close—will sport



an icon instead. An icon editor lets you choose from several icons. These are aesthetic changes, but there is more.

The real benefit of Dialog Enhancer '99 is its improved PM interface, which uses the WarpSans font instead of the old System Proportional font. It gives the dialog boxes a finished look, also improving their positioning and size. It even adds extra information to some dialogs, to clarify the text. The screen footprint has been reduced for all windows. These redesigned resources are compressed, so they take up less space when loaded into memory.

Dialog Enhancer
$20.00

Available from:
BMT Micro

www.bmtmicro.com

An extensive Readme file covers everything you need, from installation and uninstallation instructions to troubleshooting.

This shareware program works with OS/2 Warp 4 and needs roughly 40MB of disk space. It supports Fix Packs, and the author provides specific instructions for dealing with them.

The program is available via download from `www-student.1boro.ac.uk/~mcrsc/ostrans.html` and can be registered through BMT Micro for $20. You might also want to refer back to the July 1999 issue of extended attributes in the Random Bits column for some additional comments about Dialog Enhancer '99.

I would certainly recommend this application to anyone looking for a great desktop enhancement utility that helps the performance of your system instead of making it work harder.

Neophyte, not!

by John Wubbel

Many companies are anxious to move to newer software technologies like object orientation (OO). It's common to have a staff of programmers that are not trained to take advantage of new OO tools, compilers, and development environments.

I have heard programmers described by management as "neophytes." What management means is that the developers have experience in using only procedural languages. Once management has decided to shift to an OO paradigm, the programmers become either converts or "OO wannabe's."

Management may have rushed out to buy all the products for developing a major application, but most of it sits on the shelf. A ton of money has to be expended on training, or additional staff has to be hired to supplement and mentor the neophytes.

One easy way to get programmers interested in learning a new OO concept is to give them a problem that demonstrates an OO facet. It should also demonstrate the rationale for making the transition to a new way of thinking. The popular press, OO literature, and training courses ask people to make a 100% leap-of-faith into developing OO applications. You either design and code using an OO language like C++ or you don't.

Instead, I assume that neophytes are either lethargic in making that leap, or they're simply procrastinating in the hope of a training course that will somehow ease their pain.

The conversion doesn't have to be painful. The following example bridges the gap between procedural code and taking advantage of a C++ class. It's not all too common, but it is challenging and a fun way to bridge the gap.

The programming problem is in the context of a medical application. Vaccinations are given to children to prevent childhood diseases. The vaccination is recorded and becomes a permanent part of the medical record. Frequently, the parent and child must stay in the office for 20 or 30 minutes to see if there is a reaction to the vaccine. If so, the reaction must also be recorded.

This is the problem: once the record is saved to the database, it cannot be modified without performing an update or delete action.

Instead of saving it to the database, we'll save the record to a temporary table. (This is known as "suspending" the record.) When the record is suspended, an object window containing a timer is started on a new thread. When the timer elapses, it audibly and visually reminds the nurse to check the patient's status. The nurse then recalls the record, makes any needed modifications, and saves it to the database.

I call the reminder function a tickler, so the class in this code is called the hppTicklerObject.

Implementing the code involved these considerations:

1. The application was written in C. For C to use a class written in C++, you must be able to call a function in the C++ code.
2. The function called from the C++ code must be started on a separate thread.
3. The object must be persistent until the thread ends.
4. Each object reuse must have its own context. In other words, several vaccination records may be suspended at the same time.

In order to solve item 1, the header file (hpptic.h) defines the function using extern "C":

```
#ifdef __cplusplus
extern "C"
{
#endif
void HppVacTimerObjThread(void *pVacDataObj);
#ifdef __cplusplus
}
#endif
```

Item 2 is handled by calling the function, starting a thread, and passing a pointer so that data is available within the object window procedure.

Items 3 and 4 are dealt with by creating a new thread and a new instance of the object each time a record is suspended.

I tried to keep everything simple, to illustrate how powerful a new way of thinking can be once a developer implements the solution. You realize what a class can do, particularly when you consider how it might be implemented without the use of the class.

In many cases, developers are the caretakers for legacy code that requires minor enhancements from time to time, but no possibility of a total rewrite. Bridging the gap between OO and procedural languages should help get developers excited. In turn, developers will start looking for similar ways to apply and learn OO techniques. When the programmers take the initiative, the company's training costs decrease. It's a case where you have a lot of gain and no pain.

[The code on the next page is a fragment. The full code is available on `www.possi.org`*.]*

The hppTicklerObject class definition:

```
class hppTicklerObject
{
   DATETIME dt;
   long lStartTime;
   long lExpireTime; // from pVacData->sMinutes
   long lRemainingTime;
   long lCurrentTime;
   char szMedRecNbr[17];
   char szPatientName[49];
public:
   void initMedRecNbr(PSZ pszMedRecNbr);
   void initPatientName(PSZ pszPatientName);
   void initTicklerObjData();
   void initExpirationTime(long eTime);
   void setStartTime();
   void setCurrentTime();
   long getTime();
   long diffTime();
   void getMedRecNbr(PSZ pBuf);
   void getPatientName(PSZ pBuf);
};
```

The timer thread:

```
void HppVacTimerObjThread(void *pVacDataObj)
{
   /* ... declarations not shown ... */
   hABTic = WinInitialize(0UL);
   hMsgQTicObj = WinCreateMsgQueue(hABTic,0);
   WinRegisterClass(
      hABTic,
      szTicObjClass,
      (PFNWP)HppObjTicProc,
      CS_SIZEREDRAW,
      sizeof(PVACDATA));
   /* ...
   * Code not shown:
   * creation of windows
   * The WinProc from thread 1 is passed to WM_CREATE
   */
   while ( WinGetMsg(hABTic,(PQMSG)&qMsgTicObj, (HWND)0UL,0,0))
      WinDispatchMsg( hABTic, (PQMSG)&qMsgTicObj );
   /* ... destroy windows and terminate ... */
   _endthread();
}
```

From the HPPObjTicProc window procedure:

```
static hppTicklerObject Tickler; // declaration of C++ class
/* ... message switch ... */
case WM_CREATE:
   {
   pVacData = (PVACDATA)mp1; // comes from parameter 12
                             // store MR# & Name with object
   strcpy(pMedRecNbrBuffer, pVacData->szMedical_Record_Nbr);
   strcpy(pPatientNameBuffer, pVacData->szPatientName);
   Tickler.initTicklerObjData();
   Tickler.initMedRecNbr(&pMedRecNbrBuffer[0]);
   Tickler.initPatientName(&pPatientNameBuffer[0]);
   Tickler.initExpirationTime(pVacData->sMinutes * 60000);
   if ( Tickler.diffTime() < 600000 ) // i.e. < 10 minutes
   { // set timer interval to 2 minutes
      WinStartTimer(hABTic, hwnd, ID_TIC_TIMER, 120000UL);
   }
   else // for time periods > 10 minutes
   { // set timer interval to 10 minutes
      WinStartTimer(hABTic, hwnd, ID_TIC_TIMER, 60000UL);
   }
   DosPostEventSem(hevMonitorTicEvent);
   return((MRESULT)FALSE);
   }
   break;
case WM_TIMER:
   { // if the time difference < 10, reset timer to 2 minute
     // interval warnings. if time expires, set the bit in
     // the table and end this thread.
   if ( Tickler.diffTime() <= 0 )
   {
      WinStopTimer(hABTic, hwnd, ID_TIC_TIMER);
      // okay time expired set expire bit in ULScratch_Table
      // kill Tickler object, send close message and end thread
      DosCreateEventSem("\\sem32\\clsevent",
            &hevCloseTicEvent, 0, FALSE);
      Tickler.getMedRecNbr(&pMedRecNbrBuffer[0]);
      Tickler.getPatientName(&pPatientNameBuffer[0]);
      strcpy(szMedRecNbrBuffer, pMedRecNbrBuffer);
      strcpy(szPatientNameBuffer, pPatientNameBuffer);
      WinBroadcastMsg(
         HWND_DESKTOP,
         WMP_TICKLER_STATUS_UPDATE,
         MPFROMLONG(0L),
         MPFROMLONG(WMP_TICKLER_STATUS_UPDATE),
         BMSG_POST);
      // wait until the hpp.c call
      // _HppSetExpireBitULScratch_Table() to protect global
      // variables from reuse by another suspended record
      DosWaitEventSem(hevCloseTicEvent, SEM_INDEFINITE_WAIT);
      DosCloseEventSem(hevCloseTicEvent);
```

Norton vs. Norman: Shootout at the AV Corral

by Rick Blankenbaker

review

With just about everyone—and soon, maybe everything as well—connected to the Internet, it has become necessary to use some sort of anti-virus software to protect oneself from malicious attacks of the non-biological viral sort. Although much of the publicity of late has dealt with macro viruses, OS/2 is not immune from the danger.

Although OS/2-native viruses are almost unknown, other viruses can do major harm to an OS/2 machine. For this reason, everyone should consider it mandatory to have good anti-virus protection in place prior to saddling up and riding out into the wilderness, metaphorically speaking. Let's take a look at the two leading crime-fighters.

Norton Antivirus 5.0

In arranging this shootout, a paradox quickly developed. You see, I was going to portray Norton Antivirus (NAV) as the wise old seasoned gunfighter, survivor of countless battles. After all, Norton Antivirus has existed since, well, almost as long as the first virus.

However, in this instance, the analogy would be incorrect. The Symantec offering is the newer of the two products, the OS/2 version having been available for a few months now. It is the follow-on to the highly-regarded IBM Antivirus product, so it can claim roots going back quite some way. Do not think that this is just a re-packaged IBM Antivirus clone though. Actually, you have to look hard to spot the IBM influence. At least technically—in one particular way, IBM's voice was obviously heard quite clearly. I'll cover that shortly.

Norman Virus Control 4.60

Most people have never heard of Norman Virus Control (NVC) nor the company that produces it, Norman Data Defense Systems. At one time, I was one of them. However, a search of OS/2 anti-virus solutions will uncover this Norwegian company that has existed since 1984, and its US subsidiary, since 1993. The company sells a wide range of security and encryption-related products, and counts the US Department of Defense among its customers.

Norman Virus Control
$25.00

Norman Data Defense Systems
9302 Lee Highway, Suite 950A
Fairfax, Virginia 22031

(703) 267-6109
www.norman.com

Norton Antivirus

Symantec Corporate Offices
10201 Torre Avenue
Cupertino, CA 95014-2132

(408) 253-9600
www.symantec.com/nav

At one time, NVC was bundled as the OS/2 component of the Novaworks Security Suite, along with Novastor back-up. Norman Virus Control is now available as a stand- alone product.

Rules of engagement

To perform this comparison, I wanted to concentrate on those areas where each product differentiates itself. The main function of these two products is identical: to search for, and if possible, remove, viruses from a PC or network. Each product claims to protect against roughly 40,000 viruses. It would hardly be feasible to test even a fraction of those—assuming, of course, that I wanted to round up that many viruses to start with!

Both products use the familiar IBM software installer. NAV generates an uninstall object in its desktop folder, a feature that's always appreciated. NVC offers an informative anti-virus tutorial in INF format.

NVC uses about 3.6MB disk space. NAV requires 4.5MB in its application directory, and installed another 2.5MB of virus definition files on my C: drive, even though I'd specified that it install to my F: drive. That was definitely *not* appreciated.

Both manuals cover just about everything needed, although finding even basic procedures in the Norton manual is sometimes difficult; it is heavily geared towards the enterprise IS-controlled CID-install environment. Norman Virus Control came with only an electronic manual on the CD (in Acrobat's PDF format). Both products also have adequate on-line help.

Scanning

Neither product offers real-time protection for OS/2 viruses. Both offer this function for DOS and Win-OS/2 sessions, called Autoprotect in NAV and Smart Behavior Blocking in NVC. What this means is that the system is monitored for virus-like actions continuously during DOS/Win sessions, but not in OS/2 itself.

Although I don't consider this a major flaw, it is somewhat annoying that such a potentially valuable feature is missing. This would be extremely useful when downloading files off the Internet, to name one good use.

However, the scanning features available do compensate somewhat. Each product can scan 19 different file types and can add more. NAV allows certain files to be excluded from a scan. NVC lets you scan a single directory or file, and can run at idle priority, doing its scanning in the background. Also, NVC can store all scan settings as styles, which can then be used in the scheduler or from a command line. A plus for NVC is its ability to scan archived files such as zip, rar, and lzh with an external unpacker, so future archive formats can be easily supported. NAV's compressed file formats appear to be hard-coded.

I attempted a crude test of scanning speed using my 60MB maintenance partition as the target. On my 64MB K6-200 system, NVC took 9 seconds to scan all 230 files.

NAV followed at 11 seconds. That's not a huge difference, but perhaps it's significant to someone who scans tens of gigabytes on a network.

Scheduling

The best anti-virus scanner in the world is of little use if it's not used regularly. If you're like me, system maintenance is not high on your list of things to remember.

Thankfully, there's an easier way. Both products let you schedule virus scanning, either one- time or periodically.

With NAV, any event, including program execution or updates, can be scheduled. This includes any program that may be started from a command line. However, on my system, I had mixed success in getting scheduled events to activate properly. Displaying simple text messages or starting a virus scan was no problem, although I discovered that the scan would only start if the Norton scanner was not already open; otherwise, the program just sat there doing nothing. But attempting to start other programs produced a WPS hang, requiring the services of CAD Commander to kill the scheduler. A visit to Symantec's help forum was unsuccessful in resolving the problem, and I am currently awaiting an email response from tech support. I have seen only one other report of a similar problem, so this may be peculiar to a specific hardware/software configuration.

The Norman scheduler, while limited to performing virus scans only, had no problems performing as expected. The interface is not as intuitive as Norton's, though. For example, eight entry fields exist for each scheduled event, but only the last field has a spin button; after some fiddling, I realized that the spin button is active for whatever field has focus. A neat trick, but confusing. As I mentioned earlier, the NVC scheduler can also use predefined styles to ease setup of specific scan parameters—a powerful and versatile tool.

Updates

All antivirus programs rely heavily on knowing in advance the characteristic—definitions—of specific viruses being searched for. As new viruses are constantly found, these definitions must be kept up to date.

Both products offer fairly simple means of ensuring up-to-date protection. Norton's uses a process known as LiveUpdate to fetch new virus definitions from the Symantec FTP site. It worked flawlessly for me, downloading a 2.7MB file in a little less than 5 minutes. As I mentioned, this process can also be set up to occur automatically using the scheduler.

NVC uses the familiar IBM RSU mechanism to download and install definitions from their password-protected site. A new definition file package of slightly less than one megabyte downloaded in about the same time as NAV's larger file. Both products provided a nearly hands-free update.

Odds and Ends

Both products can save various scan results to a log file. NVC's logfile is simple ASCII text, which can be read with any editor or word processor. Norton's file appears to be binary; I could only read it within the Norton viewer. NAV does allow the size of this file to be restricted, a feature you'll value if you've ever found a 5MB logfile on your system. Also, NAV provides password access for viewing logfiles and modifying settings, useful in a multi-user environment.

Norman's also includes an interesting feature known as the Canary. This comprises two executable files—an .exe and .com—which are self-aware of their sizes, timedates and checksums; the purpose of these files is to act as "bait" for any unknown viruses. If the files are executed and not infected, they return the message "The Canary Bird Lives and all is well." If infected, an appropriate "The Canary Bird is Dead" is displayed.

Both products are certified as Year 2000 compliant by their manufacturers.

The Outcome

Either one of these products will do an admirable job protecting your system. Each has its strengths and weaknesses.

However, in my opinion, Norman Virus Control is a bit quicker on the draw. It has a more "finished" feel, and it works as advertised.

Norton Antivirus, while a strong product based on proven technology, still feels like a competent version 1.0 release: a good feature list with a few minor bugs here and there. I expect that the next release will correct the few problems I experienced. Also, it would seem that IBM has been whispering into Symantec's ear; not only is that feature list geared towards larger enterprises, but it is only available as part of the Norton AntiVirus Solution Suite in quantities of ten licenses or more. According to Symantec, this situation will change later this year when they will include it in the retail edition of NAV. However, if you're a registered owner of IBM Antivirus, an update to NAV is currently offered for $9.95. Unfortunately, Symantec has no trial version of NAV for OS/2 available, nor could I find out if one was planned.

An evaluation version of Norman Virus Control for OS/2 is available from the company's Web site. If you're in the market for the quickest gun in OS/2 anti-virus solutions, I'd suggest that you give it a try.

(Norman Virus Control has recently been updated to version 4.70; among other things, the company claims it offers better protection against Trojan viruses, smarter detection of unknown viruses, and on-the-fly removal of boot sector viruses. I was unable to acquire a copy of version 4.70 in time for this review.)

Rick Blankenbaker has been an avid OS/2 user since 1994. He is a test engineer for Motorola, and lives with his wife and six children near Harvard, Illinois. He can be reached via email at rickdb@mc.net.

New and improved

compiled by Esther Schindler

Last month, we had a batch of developer tools. We must be out of Developer Season, though, and into End-user Tool Season. The new and updated OS/2 applications this month include a desktop publisher—finally!—a Web-based discussion program, as well as an OS/2 utility to connect to the popular Diamond Rio MP3 music player.

Night Vision

Night Vision 2.3 is a planetarium program for OS/2. It can display the heavens from any location on Earth. Viewing options allow you to control star parameters, fonts, and the sky objects to display. Time may be set to run at multiple speeds, including backwards, and you can print star charts.

This version adds Bayer (Greek letter) and Flamsteed star IDs, constellation boundaries, and an improved Help system. Altitude and azimuth are now saved with preferences.

Night Vision is available at BMT Micro for $25, or you can email the author at `nightvision@bmtmicro.com`. The developer's Web site is found at `http://home.att.net/~bsimpson/nvsn.html`.

UPS Monitor for OS/2

The UPS Monitor for OS/2 1.1 utility monitors the status of an American Power Conversion (APC) Uninterruptible Power Supply (UPS). It provides shutdown services to the operating system and performs scheduled shutdown and restart, assuming that the feature is provided with the UPS model you own. The utility includes two programs optimized for most APC-brand UPS models.

This release supports UPS parameter settings for 115V and 220V models of the Back-UPS Pro and Smart-UPS series. It also has parameter logging, at adjustable time intervals.

You can find out more about this $15 program at `http://home.att.net/~ASchw`.

DragText

DragText 3.1 is the latest release of a distinctly different Desktop enhancement for OS/2 Warp. Present almost everywhere yet invisible until needed, DragText lets you do what others can't.

Handle Text as an object: Text in windows, files, and the clipboard becomes an object that can be copied, moved, saved or deleted using drag-and-drop — and now, using pickup-and-drop as well.

Access WPS Objects from Any Program: Treat a filename or Object ID like a shadow of the object it names. Use a window's System Menu button as your link to the object that opened it. Drag these objects or use their menus; you can navigate the Desktop without opening a folder or even leaving your application.

DTProgram, a comprehensive enhancement for program objects, is also included in DragText. Set environment variables, customize menus, and now, in version 3.1, schedule objects to open on selected days or dates.

DragText 3.1 is available for a 6-week free trial. Continued use of its extended features costs $20. DragText's basic features are free for unlimited use. Upgrades are free for registered users, though reregistration is appreciated.

For a longer list of new features, visit the author's site at `www.usacomputers.net/personal/rlwalsh`.

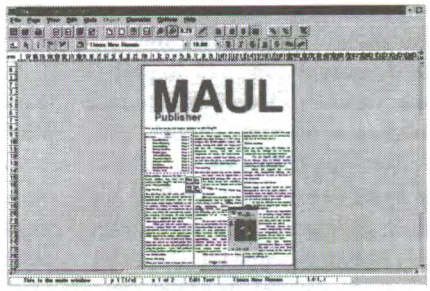
Maul Publisher

Maul Publisher is a desktop publishing application for OS/2 Warp.

Maul Publisher provides master pages, frame style sheets, text style sheets, title extraction styles, and full undo and redo. Maul Publisher can be expanded with custom modules for a multitude of tasks, such as importing or exporting other data formats, color management, or scanning.

You have full control of column, row, gutter, and center gutter guides. Maul Publisher automatically page numbers folding booklets, reverses margins for facing pages, and page numbers offsets when you don't want to start from page one. Frames may have an associated foreground, a background, and border. Frames can be transparent or locked into place.

Create any shape, scale it, rotate it, add borders, add backgrounds, add foregrounds. You can have shapes with text on text, text on pictures, pictures on text... borders, no



borders, colors, two colors, no color. This manipulation incorporates accurate snap and lock functions. Maul Publisher justifies text within any shaped polygon, flows around other polygons of any shape, and avoids running into borders within its own shape and other overlapping shapes.

Maul Publisher costs $79. Find out more at http://perso.wanadoo.fr/maisonanglais.

TheWall

Eirik Overby (ltning@mo.himolde.no) has begun development of a simple program to configure the built-in TCP/IP firewall for OS/2 (TCP/IP 4.1 and above).

IBM included firewall functionality in their newer TCP/IP stacks, but never documented it. Thus, setting up the firewall and configuring it has been quite difficult.

This program makes the process a lot easier, by providing a graphical user interface to manage the firewall rules and the firewall itself. You can find it at www.mo.himolde.no/~ltning/thewall0 95.rar — but the author asks that you consider this program a beta, and provide him with feedback. Comments, suggestions, bug reports and success reports are all welcome.

World Clock

Goran Ivankovic (goran_ivankovic @excite.com) released World Clock 0.96, a free configurable clock with daylight savings time, stopwatch, alarm and program launcher. It works for one to nine cities, which you can choose from a city list of more than 360.

To download World Clock 0.96, visit http://members.tripod.com /~Goran_Ivankovic.

Process Commander 2.10

Process Commander 2 version 2.1 has been released. Process Commander is a free OS/2 desktop enhancer with an impressive amount of functionality.

Export and import parts of the Popup Menu to and from files. Activate the Popup Menu from the keyboard, including the "Win95" keys, and launch applications from there.

PC/2 includes a virtual desktop, with up to 9x9 virtual screens. A Sliding Focus feature automatically activates X-window-like control of the window below the mouse pointer. It includes Advanced Marking, hot keys, dynamic menu selection, environment space management, a SessionBar and QuickSwitch. Its hardware panning support ensures that windows won't be larger than your laptop's LCD display, even when they're maximized. There's more, too—title bar SmartIcons, desktop security, a scheduler, and APM support, but to learn about them, you ought to check out the author's Web site at www.geocities.com/SiliconValley/Pines/7885.

PGPro Scripts

TrueSpectra is no longer marketing its Photo>Graphics application for OS/2 (or for any other platform, for that matter), but plenty of OS/2 users are still using the popular graphics application. Don Eitner has been creating several open-source PGPro Scripts, and has brought the collection up to the version 3 level.

For example, a Greeting Card script makes it easy to create simple foldable greeting cards. Version 3 includes a REXX script for creating "star burst" effects.

PGPro Scripts v3.0 can be downloaded from www.tstonramp.com/~freiheit /PGPro_Scripts_30.zip.

Lotus Organizer Y2K patch

Lotus quietly released a new org32b.dll for Organizer for OS/2 Warp 4 1.1. It fixes a Y2K filter issue. You'll find it at www2.support .lotus.com/ftp/pub/desktop/Organizer/os2 /updates.

Unisched

Tobias Ernst (tobi@bland.fido.de) has released Unisched 1.0. Unisched is scheduler software that can run actions in the case of events (time, file system, and others).

Unisched includes English language documentation, and is optimized for use in a Fidonet node environment. Unisched can be obtained from ftp://ftp.bmtmicro.net /bmtmicro/unischla.zip.

Sysbench updated

Trevor Hemsley (Trevor-Hemsley@dial.pipex .com) released the latest release of his free

OS/2 benchmarking software, Sysbench. It includes some bug fixes, but most of its new features are designed to detect newer processors (such as Intel's Pentium III and AMD's K6-3).

You'll find it at `http://warped.cswnet.com/Sysbench` or `ftp://hobbes.nmsu.edu/pub/os2/util/benchmark`.

Diamond Rio MP3 utility

If you own a Diamond Rio portable MP3 player (`www.diamondmm.com/products/current/rio.cfm`), you can now use OS/2 as your host system to upload, download, reorder, and otherwise modify your Rio's playlist. The file `rio006-2.zip` (at Hobbes in `/pub/os2/apps/mmedia/sound/util`) contains a port of Ashpool's Rio control program to OS/2.

More info on this free (Gnu Public License) utility, including a description of how the control protocol was determined, is available at `www.world.co.uk/sba/rio.htm`.

Emacs 20.3.1 for OS/2

Emacs is a text editor popular in the Unix world, and the war between the Emacs and vi editors have probably spawned more flame wars than any OS conflict you could name. If you're on the Emacs side, you'll appreciate knowing that Jeremy Bowen (`jeremyb@clear.net.nz`) released a version of GNU Emacs 20.3.1 for OS/2. It is available from Hobbes in the `apps/editors/emacs/v20.3.1` directory.

Ceilidh 2.50 for OS/2

Lilikoi Software, Inc. Ceilidh 2.50a is a Web-based discussion package that lets you create online forums. It's available for several operating system, from OS/2 to Macintosh to Windows, and works with just about any Web server.

The notable new feature in version 2.50a is the ability to contract/expand threads in the message index page, a capability that can coexist with the fully expanded format if you offer your users a choice of URLs. The contracted index works very well on Lilikoi's support forum, but you must decide whether or not this is better for your forum(s). On a technical level, contracting threads reduces bandwidth at the expense of additional server-side processing. On a practical level, contracted threads makes for far less clutter, but it is important that replies stay on topic.

The Ceilidh pricing is a little complex, but since it starts at "free" you might be interested in taking a look. Learn more about it at `www.lilikoi.com`.

xBaseJ

xBaseJ is a collection of Java classes which enable Java applets and applications to access dBase III and IV DBF, DBT, NDX, and MDX files. You can download the program or learn more about its features at www.americancoders.com.

Available at BMT Micro. $95.

FileJet

FileJet 7.75 is a multi-platform file manager and editor for OS/2, Windows 9x/NT, and DOS. It costs from $49 to $79, and is available at BMT Micro.

E-Rotor

E-Rotor checks for the presence of new email in your mailbox — or mailboxes, as there's no fixed limit to the number of accounts it can check. An animated icon and audio sound alert you when a message is received. E-Rotor requires VROBJ.DLL. It's $10, and available at BMT Micro.

BOTS

It's another freeware OS/2 game! Benjamin Armstrong's (`benjamin@bacchus.com.au`) BOTS is available at `www.bacchus.com.au/~ben/welcome.html`.

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